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# ENTERED

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#2.

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/10/079,478

DATE: 03/07/2002  
 TIME: 10:08:19

Input Set : A:\UF-178AXC2.txt  
 Output Set: N:\CRF3\03072002\J079478.raw

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3 <110> APPLICANT: Hannah, L. Curtis
4   Greene, Thomas W.
6 <120> TITLE OF INVENTION: Heat Stable Mutants of Starch Biosynthesis Enzymes
8 <130> FILE REFERENCE: UF-178AXC2
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/079,478
C--> 10 <141> CURRENT FILING DATE: 2002-02-19
10 <150> PRIOR APPLICATION NUMBER: US 09/312,433
11 <151> PRIOR FILING DATE: 1999-05-14
13 <150> PRIOR APPLICATION NUMBER: US 60/085,460
14 <151> PRIOR FILING DATE: 1998-05-14
16 <150> PRIOR APPLICATION NUMBER: US 08/972,545
17 <151> PRIOR FILING DATE: 1997-11-18
19 <150> PRIOR APPLICATION NUMBER: US 60/031,045
20 <151> PRIOR FILING DATE: 1996-11-18
22 <160> NUMBER OF SEQ ID NOS: 36
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 33
26 <212> TYPE: PRT
27 <213> ORGANISM: HS33 Mutant of Zea mays
29 <400> SEQUENCE: 1
31 Leu His Asp Phe Gly Ser Glu Ile Leu Pro Arg Ala Val Leu Asp Tyr
32   1           5           10           15
34 Ser Val Gln Ala Cys Ile Phe Thr Gly Tyr Trp Glu Asp Val Gly Thr
35   20           25           30
37 Ile
40 <210> SEQ ID NO: 2
41 <211> LENGTH: 33
42 <212> TYPE: PRT
43 <213> ORGANISM: Zea mays
45 <400> SEQUENCE: 2
47 Leu His Asp Phe Gly Ser Glu Ile Leu Pro Arg Ala Val Leu Asp His
48   1           5           10           15
50 Ser Val Gln Ala Cys Ile Phe Thr Gly Tyr Trp Glu Asp Val Gly Thr
51   20           25           30
53 Ile
56 <210> SEQ ID NO: 3
57 <211> LENGTH: 33
58 <212> TYPE: PRT
59 <213> ORGANISM: Triticum aestivum
61 <400> SEQUENCE: 3
63 Leu His Asp Phe Gly Ser Glu Ile Leu Pro Arg Ala Leu His Asp His
64   1           5           10           15
66 Asn Val Gln Ala Tyr Val Phe Thr Asp Tyr Trp Glu Asp Ile Gly Thr

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67          20          25          30
69 Ile
72 <210> SEQ ID NO: 4
73 <211> LENGTH: 33
74 <212> TYPE: PRT
75 <213> ORGANISM: Hordeum vulgare
77 <400> SEQUENCE: 4
79 Leu His Asp Phe Gly Ser Glu Ile Leu Pro Arg Ala Leu His Asp His
80  1          5          10          15
82 Asn Val Gln Ala Tyr Val Phe Thr Asp Tyr Trp Glu Asp Ile Gly Thr
83          20          25          30
85 Ile
87 <210> SEQ ID NO: 5
88 <211> LENGTH: 33
89 <212> TYPE: PRT
90 <213> ORGANISM: Solanum tuberosum
92 <400> SEQUENCE: 5
94 Ser Asn Asp Phe Gly Ser Glu Ile Leu Pro Ala Ala Ile Asp Asp Tyr
95  1          5          10          15
97 Asn Val Gln Ala Tyr Ile Phe Lys Asp Tyr Trp Glu Asp Ile Gly Thr
98          20          25          30
100 Ile
102 <210> SEQ ID NO: 6
103 <211> LENGTH: 26
104 <212> TYPE: PRT
105 <213> ORGANISM: HS40 Mutant of Zea mays
107 <400> SEQUENCE: 6
109 Ala Gly Lys Val Pro Ile Gly Ile Gly Arg Asn Ile Lys Ile Arg Asn
110  1          5          10          15
112 Cys Ile Ile Asp Met Asn Ala Arg Ile Gly
113          20          25
116 <210> SEQ ID NO: 7
117 <211> LENGTH: 26
118 <212> TYPE: PRT
119 <213> ORGANISM: Zea mays
121 <400> SEQUENCE: 7
123 Ala Gly Lys Val Pro Ile Gly Ile Gly Arg Asn Thr Lys Ile Arg Asn
124  1          5          10          15
126 Cys Ile Ile Asp Met Asn Ala Arg Ile Gly
127          20          25
130 <210> SEQ ID NO: 8
131 <211> LENGTH: 26
132 <212> TYPE: PRT
133 <213> ORGANISM: Triticum aestivum
135 <400> SEQUENCE: 8
137 Glu Gly Lys Val Pro Ile Gly Val Gly Glu Asn Thr Lys Ile Ser Asn
138  1          5          10          15
140 Cys Ile Ile Asp Met Asn Ala Arg Ile Gly
141          20          25

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144 <210> SEQ ID NO: 9
145 <211> LENGTH: 26
146 <212> TYPE: PRT
147 <213> ORGANISM: Hordeum vulgare
149 <400> SEQUENCE: 9
151 Glu Gly Lys Val Pro Ile Gly Val Gly Glu Asn Thr Lys Ile Ser Asn
152   1           5           10           15
154 Cys Ile Ile Asp Met Asn Ala Arg Ile Gly
155           20           25
158 <210> SEQ ID NO: 10
159 <211> LENGTH: 26
160 <212> TYPE: PRT
161 <213> ORGANISM: Solanum tuberosum
163 <400> SEQUENCE: 10
165 Glu Gly Lys Val Pro Ile Gly Ile Gly Glu Asn Thr Lys Ile Arg Lys
166   1           5           10           15
168 Cys Ile Ile Asp Lys Asn Ala Lys Ile Gly
169           20           25
172 <210> SEQ ID NO: 11
173 <211> LENGTH: 11
174 <212> TYPE: PRT
175 <213> ORGANISM: Spinicia oleracea
177 <400> SEQUENCE: 11
179 Ile Lys Asp Ala Ile Ile Asp Lys Asn Ala Arg
180   1           5           10
183 <210> SEQ ID NO: 12
184 <211> LENGTH: 20
185 <212> TYPE: PRT
186 <213> ORGANISM: TS48 Mutant of Zea mays
188 <400> SEQUENCE: 12
190 Cys Ser Arg Val Ser Ser Gly Cys Glu Phe Lys Asp Ser Val Met Met
191   1           5           10           15
193 Gly Ala Asp Ile
194           20
197 <210> SEQ ID NO: 13
198 <211> LENGTH: 20
199 <212> TYPE: PRT
200 <213> ORGANISM: Zea mays
202 <400> SEQUENCE: 13
205 Cys Ser Arg Val Ser Ser Gly Cys Glu Leu Lys Asp Ser Val Met Met
206   1           5           10           15
208 Gly Ala Asp Ile
209           20
212 <210> SEQ ID NO: 14
213 <211> LENGTH: 20
214 <212> TYPE: PRT
215 <213> ORGANISM: Triticum aestivum
217 <400> SEQUENCE: 14
219 Arg Ser Arg Leu Asn Ser Gly Ser Glu Leu Lys Asn Ala Met Met Met

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220      1              5              10              15
222 Gly Ala Asp Ser
223              20
226 <210> SEQ ID NO: 15
227 <211> LENGTH: 20
228 <212> TYPE: PRT
229 <213> ORGANISM: Hordeum vulgare
231 <400> SEQUENCE: 15
233 Arg Ser Arg Leu Asn Ser Gly Ser Glu Leu Lys Asn Ala Met Met Met
234      1              5              10              15
236 Gly Ala Asp Ser
237              20
240 <210> SEQ ID NO: 16
241 <211> LENGTH: 12
242 <212> TYPE: PRT
243 <213> ORGANISM: Oryza sativa
245 <400> SEQUENCE: 16
247 Ser Ser Arg Val Ser Ser Gly Cys Glu Leu Lys Ile
248      1              5              10
251 <210> SEQ ID NO: 17
252 <211> LENGTH: 24
253 <212> TYPE: PRT
254 <213> ORGANISM: TS60 Mutant of Zea mays
256 <400> SEQUENCE: 17
258 Asp Phe Gly Ser Lys Ile Leu Pro Arg Ala Val Leu Asp His Ser Val
259      1              5              10              15
261 Gln Ala Cys Ile Phe Thr Gly Tyr
262              20
265 <210> SEQ ID NO: 18
266 <211> LENGTH: 24
267 <212> TYPE: PRT
268 <213> ORGANISM: Zea mays
270 <400> SEQUENCE: 18
272 Asp Phe Gly Ser Glu Ile Leu Pro Arg Ala Val Leu Asp His Ser Val
273      1              5              10              15
275 Gln Ala Cys Ile Phe Thr Gly Tyr
276              20
279 <210> SEQ ID NO: 19
280 <211> LENGTH: 24
281 <212> TYPE: PRT
282 <213> ORGANISM: Triticum aestivum
284 <400> SEQUENCE: 19
286 Asp Phe Gly Ser Glu Ile Leu Pro Arg Ala Leu His Asp His Asn Val
287      1              5              10              15
289 Gln Ala Tyr Val Phe Thr Asp Tyr
290              20
293 <210> SEQ ID NO: 20
294 <211> LENGTH: 24
295 <212> TYPE: PRT

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296 <213> ORGANISM: Hordeum vulgare
298 <400> SEQUENCE: 20
300 Asp Phe Gly Ser Glu Ile Leu Pro Arg Ala Leu His Asp His Asn Val
301   1           5           10           15
303 Gln Ala Tyr Val Phe Thr Asp Tyr
304           20
307 <210> SEQ ID NO: 21
308 <211> LENGTH: 25
309 <212> TYPE: PRT
310 <213> ORGANISM: Oryza sativa
312 <400> SEQUENCE: 21
314 Asp Phe Gly Ser Glu Ile Leu Pro Arg Ala Leu Leu Glu His Asn Val
315   1           5           10           15
317 Lys Val Ala Cys Val Phe Thr Glu Tyr
318           20           25
321 <210> SEQ ID NO: 22
322 <211> LENGTH: 25
323 <212> TYPE: PRT
324 <213> ORGANISM: TS60 Mutant of Zea mays
326 <400> SEQUENCE: 22
328 Glu Asp Val Gly Thr Ile Lys Ser Phe Phe Asp Ala Asn Leu Val Leu
329   1           5           10           15
331 Thr Glu Gln Pro Ser Lys Phe Asp Phe
332           20           25
335 <210> SEQ ID NO: 23
336 <211> LENGTH: 25
337 <212> TYPE: PRT
338 <213> ORGANISM: Zea mays
340 <400> SEQUENCE: 23
342 Glu Asp Val Gly Thr Ile Lys Ser Phe Phe Asp Ala Asn Leu Ala Leu
343   1           5           10           15
345 Thr Glu Gln Pro Ser Lys Phe Asp Phe
346           20           25
349 <210> SEQ ID NO: 24
350 <211> LENGTH: 25
351 <212> TYPE: PRT
352 <213> ORGANISM: Triticum aestivum
354 <400> SEQUENCE: 24
356 Glu Asp Ile Gly Thr Ile Arg Ser Phe Phe Asp Ala Asn Met Ala Leu
357   1           5           10           15
359 Cys Glu Gln Pro Pro Lys Phe Glu Phe
360           20           25
363 <210> SEQ ID NO: 25
364 <211> LENGTH: 25
365 <212> TYPE: PRT
366 <213> ORGANISM: Hordeum vulgare
368 <400> SEQUENCE: 25
370 Glu Asp Ile Gly Thr Ile Arg Ser Phe Phe Asp Ala Asn Met Ala Leu
371   1           5           10           15

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## VERIFICATION SUMMARY

DATE: 03/07/2002

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Input Set : A:\UF-178AXC2.txt

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L:10 M:270 C: Current Application Number differs, Replaced Current Application No

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date